

CLAIMS:

1. A communications system comprising first and second beacon devices capable of wireless message transmission and at least one portable device capable of receiving such message transmissions, wherein said first beacon is arranged to broadcast a series of inquiry messages according to a first communications protocol, wherein said at least one portable device is arranged to detect such inquiry messages and reply with an identifier for the portable device, wherein said first beacon device is arranged to transmit a received identifier to said second beacon, and wherein said second beacon and portable device are configured to perform a service interaction when triggered by the second beacon receiving the portable device identifier.
2. A system as claimed in Claim 1, comprising a plurality of second beacon devices, each arranged to receive identifiers from the first beacon.
3. A system as claimed in Claim 1, further comprising a secure data channel linking said first and second beacon devices and for the transmission of received identifiers.
4. A system as claimed in Claim 1, wherein the second beacon device maintains and periodically updates a list of identifiers for portable devices with which a service interaction is being performed.
5. A system as claimed in Claim 4, further comprising a timer, with said second beacon device being configured to remove a portable device identifier from said list if no interaction takes place for a predetermined period.
6. A system as claimed in Claim 4, wherein said second beacon device is configured to remove a portable device identifier from said list if a duplicate copy of said identifier is received from said first beacon device.

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7. A system as claimed in Claim 4, wherein said second beacon device is configured to remove a portable device identifier from said list if said interaction includes receipt of a predetermined message requesting removal from said portable device.

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8. A system as claimed in Claim 1, wherein each inquiry message is in the form of a plurality of data fields arranged according to said first communications protocol, wherein the first beacon device is further arranged to add to each inquiry message prior to transmission an additional data field, and wherein the at least one portable device is arranged to receive the transmitted inquiry messages and read data from said additional data field.

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9. A system as claimed in Claim 8, wherein the first beacon device is arranged to include an indication in one of said predetermined data fields, said indication denoting the presence of said additional data field.

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10. A system as claimed in Claim 1, wherein said first communications protocol comprises Bluetooth messaging and wherein the first beacon device is configured to broadcast a series of inquiry messages on a predetermined clocked succession of frequencies, with clock information for said first beacon device being included in data carried by said additional data field.

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11. A mobile communication device for use in the system of Claim 1, the device comprising a receiver capable of receiving a short-range wireless inquiry message, processing means operable to process data contained within said message and compose a response message including an identifier for the device, and transmission means configured to wirelessly transmit said composed response message to the source of the inquiry message.

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12. A communications infrastructure for use in the communications system of Claim 1, the infrastructure comprising first and second beacon

devices and an interconnection therebetween, said beacon devices being capable of wireless message transmission to said at least one portable device, wherein said first beacon is operable to broadcast a series of inquiry messages according to a first communications protocol, to detect any response messages containing a portable device identifier for said portable device, and to transmit a received identifier to said second beacon, and wherein said second beacon is configured to perform a service interaction with said portable device when triggered by the second beacon receiving the portable device identifier.

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13. A communications infrastructure as claimed in Claim 12, wherein said interconnection between the first and second beacon devices comprises a secure data channel.

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14. A communications infrastructure as claimed in Claim 12, further comprising a plurality of second beacons.

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15. A communications infrastructure as claimed in Claim 14, further comprising message management means operable to initiate and effect handover of an ongoing message transmission session from one of said plurality of second beacons to another.

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16. A communications infrastructure as claimed in Claim 12, further comprising a plurality of said first beacon devices.

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17. A method for enabling the user of a portable communications device to perform a service interaction with a beacon device in an environment containing at least first and second beacon devices capable of wireless message, wherein a first beacon broadcasts a series of inquiry messages according to a first communications protocol, the users portable device detects such inquiry messages and replies with an identifier for the portable device, the first beacon device transmits a received identifier to said second beacon,

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and the second beacon and portable device perform said service interaction when triggered by the second beacon receiving the portable device identifier.

5 18. A method as claimed in Claim 17, wherein the second beacon device maintains and periodically updates a list of identifiers for portable devices with which a service interaction is being performed.

10 19. A method as claimed in Claim 18, wherein the second beacon device removes a portable device identifier from said list if no interaction takes place for a predetermined period.

15 20. A method as claimed in Claim 18, wherein the second beacon device removes a portable device identifier from said list if a duplicate copy of said identifier is received from the first beacon device.

20 21. A method as claimed in Claim 18, wherein the second beacon device removes a portable device identifier from said list if said interaction includes receipt of a predetermined message requesting removal from said portable device.

25 22. A method as claimed in Claim 17, wherein said inquiry messages are each in the form of a plurality of predetermined data fields arranged according to said first communications protocol, wherein the first beacon device adds to each inquiry message prior to transmission an additional data field carrying broadcast message data, and wherein the portable device receives the transmitted inquiry messages and reads the broadcast data from said additional data field.

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